

Notice of Allowability

Application No.

10/805,867

Examiner

Kimberly D. Nguyen

Applicant(s)

BARKAN, EDWARD

Art Unit

2876

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ The drawings filed on 30 July 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-14 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The record of prior art fails to teach a data collection signal processor in an electro-optical reader operative for scanning indicia with light in successive scans across the indicia, including a) a sensor for collecting light reflected off the indicia for each scan, and for generating an analog signal indicative of light intensity of the reflected light collected by the sensor for each scan; b) a filter having a bandpass characteristic for filtering the analog signal to produce a filtered analog signal during one of the scans; c) a digitizer circuit for digitizing the filtered analog signal to produce a pair of digitized signals for each scan; d) a controller for decoding the digitized signals for each scan, for generating a data output signal when one of the digitized signals has been decoded to signify that the indicia has been successfully read; and e) a control component operatively connected to the controller for changing the bandpass characteristic of the filter to produce a differently filtered analog signal during another scan subsequent to the one scan.

Burkey et al. (US 6,497,366; hereinafter "Burkey") teaches a dual channel data collection circuit in which light reflected from a barcode symbol is converted to a raw analog signal, and then processed in two independent data collection channels. Each channel has its own separate preamplifier, bandpass filter, threshold generator and analog-to-digital converter. Each scan produces two output signals, with aggressive thresholding on one channel, and with less

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aggressive thresholding on the other channel. Reading terminates when a processor determines that an output signal is decodable.

Beatson (US 6,781,932) teaches an apparatus for reducing noise in a tracking error signal receives input signal from an array of photodetectors, each input signal indicating the amount of light incident on the corresponding photodetector reflected from an optical disc. The input signals from diagonal pairs of photodetectors are summed and then filtered and digitized to produce a pair of digital input signals.

Tang et al. (US 6,382,511; hereinafter "Tang") teaches a system for digital barcode processing, wherein a light reflected from a barcode is captured by a photodetector to produce a photocurrent, which is converted to a voltage, amplified and filtered to produce a photovoltage. The photovoltage is differentiated to form a first derivative signal, wherein the first derivative signal is filtered and differentiated to form a second derivative signal. The first derivative signal is compared against a positive and a negative threshold and the second derivative signal is examined to detect zero crossings.

However, Burkey, Beatson, and Tang, taken alone or in combination thereof, fails to teach or fairly suggest a data collection signal processor in an electro-optical reader operative for scanning indicia with light in successive scans across the indicia having a digitizer circuit for digitizing the filtered analog signal to produce a pair of digitized signals for each scan.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly D. Nguyen whose telephone number is 571-272-2402. The examiner can normally be reached on Monday-Friday 7:30-4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KDN

12 November 2004



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